How do space and information technology affect patients' waiting experience in an ambulatory centre?

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Introduction

A frequent complaint about hospital visits is the waiting time. When planning to build a new ambulatory centre, the university hospital under study decided to approach waiting alternatively. Instead of extended waiting areas for each department, they opted for one general waiting zone. Additionally, the hospital wanted to use information technology to guide patients while waiting, allowing to visit the cafeteria or explore the (future) shopping boulevard in the complex. How patients would experience this configuration and which role space would play therein was unclear. Our study therefore aimed to gain insight into the relation between space and information technology – and their (joint) impact on waiting experience.

Research Approach

Based on an initial consultation with hospital management and staff regarding their concerns about the waiting organization in the new centre, we organized three interactive sessions with eight (former) patients each. Two patients were accompanied by a relative. For each session, we recruited a diverse group in terms of gender, age, and physical condition. Participants were invited to come to an actual hospital location covering different sizes of waiting areas, treatment rooms, a coffee corner with low tables and armchairs, and corridors decorated with artworks.

Upon arrival, a researcher welcomed participants and gave personal instructions about how to proceed. Based on realistic waiting scenarios provided by the hospital, individual waiting trajectories differing in terms of duration and location were mapped out. Each participant followed one waiting trajectory informed by a mock-up of an information device. Some received a pager, providing information on the duration of and reason behind the waiting and instructions on what to do next. Others were given a smartphone, with the pager's information plus additional options to pass time, e.g., consulting their medical record, following an art route, or being informed about the hospital. The remaining participants were handed a leaflet with an identification number and asked to follow the instructions on a public display. Two researchers observed participants throughout the waiting time.

After the waiting session participants met for a follow-up focusgroup interview. The interview started from their waiting experience and how it was affected by using a certain information device. These insights served as a basis to reflect on previous waiting experiences in other hospital settings. Throughout the interview specific attention went to spatial qualities in relation to ways of information provision. We gauged how different spaces were experienced and used, which elements influenced the decision (not) to use a certain space, and how the provided information affected this decision. These interviews aimed to gain insight into why participants took certain decisions and how they experienced waiting during the workshop compared to real-life situations.

Observations of the waiting trajectories and focusgroup interviews were analysed and positioned against insights from previous research in hospital settings. Maister's (1985) eight statements

about the experience of waiting served as a backbone to structure the insights gained through the study and communicate them to the hospital management and staff.

Findings

Regarding the role of space, participants' experience seemed affected by spatial qualities, the available equipment and what a setting affords. Relevant spatial qualities include the size of the space, mostly mentioned in relation to air quality, temperature, and acoustics. Also, the presence of pleasant (natural) light and a view towards outside were appreciated. Access to outside would have been even better. The available equipment affects how people in waiting areas (have to) interact. Rows of attached chairs make others' movements noticeable, whereas separate seats allow choosing how and with whom one interacts. Passing time in a meaningful way requires the waiting space to be equipped to do so. A table to put your laptop or a comfortable chair to read a book could suffice. Finally, how a space is experienced is affected by what it allows users to do. A space can stimulate intimacy or support interaction and activity, thus balancing personal and social space. Using information technology can help herein by informing patients about other patients' needs or wishes.

Participants liked to be informed about waiting time, medical issues, and the hospital in general. Being informed gave them a sense of control, more freedom to move around and the opportunity to choose how to pass time. Knowing why one waits also helps in the perception of waiting. Being informed about delays in advance so they could adapt their behaviour accordingly was appreciated even more. Which way of information provision was preferred differed amongst participants. Flexibility and choice seem to be the key to offer individual participants an optimal

experience. However, they preferred being assisted and informed by an actual person over a device. When participants discussed their perception and expectations of space and technology, the importance of social interaction stood out. Depending on their state of mind, occupation and attention were important issues that could be affected by space and technology. Beforehand, patients' experience is shaped by what they expect from the hospital and by the information provided. During the visit, what is happening and why affects experience.

Conclusion

The impact of space and information technology on how patients experience waiting in an ambulatory centre cannot be considered separately from the social interactions they trigger. When a hospital reflects on waiting experience, which is influenced by the design of the waiting area and information provision, each decision needs to be weighed against the social dynamics it generates. Furthermore, ongoing social dynamics affect perception of space and technology. Additionally, waiting extends beyond the hospital premises. The next waiting process starts when a new appointment is made. By consequence information should be provided both within and outside the hospital over an extended period. The offered technology should be able to deal with this variety of locations. Finally, we suggest some strategies to implement the insights gained in organizing future waiting process: provide diversity in spaces and technologies to offer patients options in (social) interactions; communicate before, during, and after each hospital visit; and guard that patients can identify with the provided space, the offered device, and the choice for both.

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Reference list

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